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ABSTRACT

Consumer Mathematics II is described as a one-year course for students in grades 9-12 who choose not to take an algebra course, but who need to broaden their mathematical understanding and skills. This curriculum guide is designed to be used in conjunction with a planbook and used as a resource in terms of long-range (semester or year) and short-range (individual lessons) planning. The guide presents everyday consumer situations and provides practice in the required mathematical skills. Student objectives, teaching strategies, references to suggested resources, and suggestions for student evaluation are provided in the guide which covers money management, measurement and estimation, statistics and probability, and pre-algebra topics. In addition to the curriculum guide, this document also contains items particular to the Hamilton Township Schools (New Jersey): (1) a philosophy of mathematics education; (2) a philosophy of education; (3) an equal educational opportunity policy and practices statement; (4) T and E (Thorough and Efficient) goals and standards; and (5) a secondary grades marking policy. A five-item bibliography is followed by brief appendices containing career education information. (JW)

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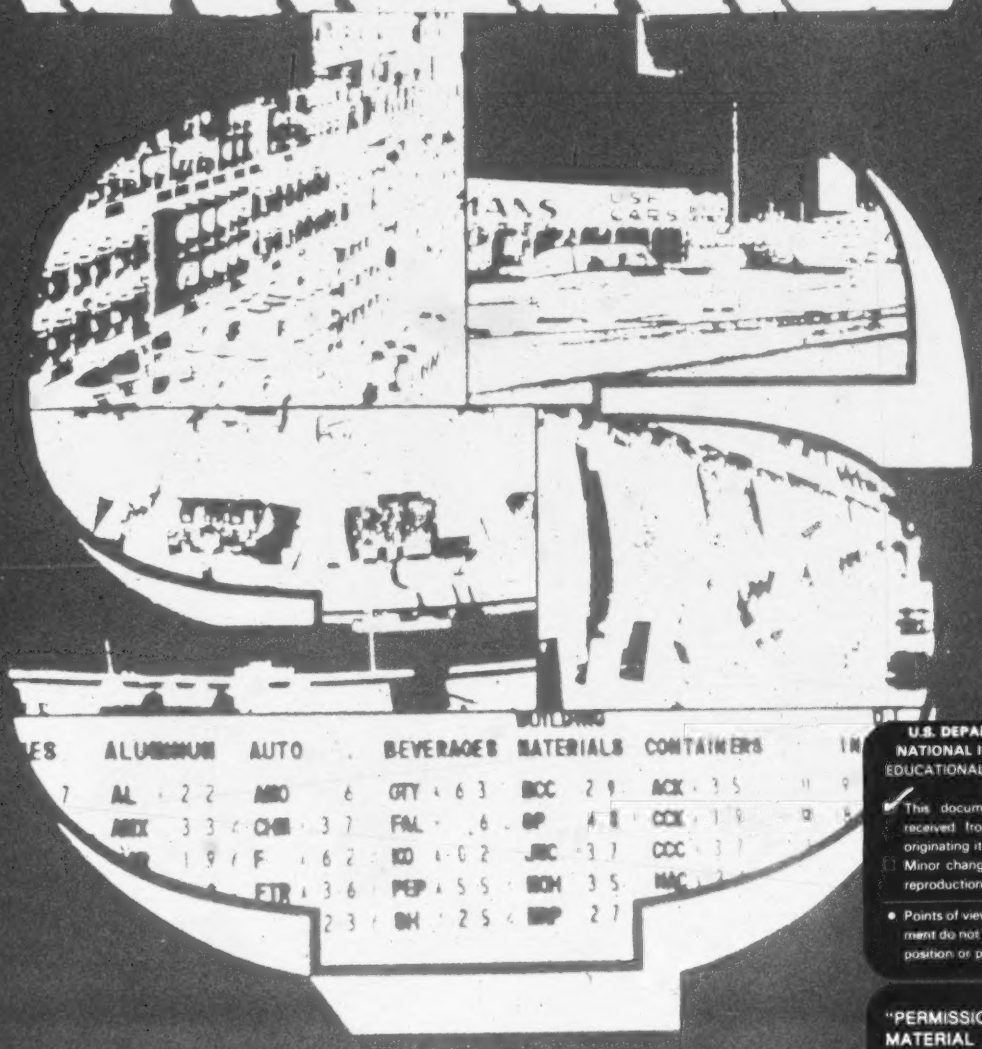
HAMILTON TOWNSHIP SCHOOLS
MERCER COUNTY, NEW JERSEY

Department of Curriculum and Instruction

CONSUMER MATHEMATICS II - M612
Grades 9-12

CONSUMER MATHEMATICS



Revised
June, 1982

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CONSUMER MATHEMATICS II

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This course of study/curriculum guide is to be used as a resource in terms of long-range (semester or year) and short-range (individual lesson) planning and as a guide for planbook completion.

The board-approved course of study contains objectives which must be addressed during the specific course. In addition, there are suggested strategies, resources, supplementary materials, and student evaluation components contained in this course of study; these components are provided as resources for the teacher.

FOREWORD

Consumer Mathematics II is a one-year course offered to students in grades nine through twelve who choose not to take an algebra course, but who need to broaden their mathematical understandings and skills. This course has no prerequisite and may be chosen at any time during a student's high school career.

This course is designed so that basic skills will not be reviewed as a formal unit. Instead, each topic from an everyday life situation will deal with the required mathematical skills as it presents itself within the unit.

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EQUAL EDUCATIONAL OPPORTUNITY

POLICY AND PRACTICES

The Hamilton Township Board of Education adopted on May 21, 1975 a policy on equal educational opportunity. The policy reads as follows:

> "That the policy of the Hamilton Township Board of Education is to promote an educational environment that will meet the needs and encourage the development of the abilities of each individual student to the extent of his/her potential within a system that provides equal educational opportunity for all."

The Hamilton Township Board of Education reaffirmed this on July 16, 1975. This policy has been developed and adopted in compliance with NJAC 6:4-1.3 and affirms also 6:4-1.5 School and Classroom Practices which indicate that:

A. No student shall be denied access to or benefit from any educational program or activity solely on the basis of race, color, creed, religion, sex, ancestry, national origin, or social or economic status.

B. There shall be no deferential requirements for completion of course offerings or course of study solely on the basis of race, color, creed, religion, sex, ancestry, national origin, or social or economic status.

C. There shall be no discrimination against students because of pregnancy, child birth, pregnancy-related disabilities, actual or potential parenthood, or family or marital status.

D. Students shall not be segregated on the basis of race, color, creed, religion, sex, ancestry, national origin, or social or economic status.

E. No course offering, including but not limited to physical education, health, industrial art, business vocational or technical courses, home economics, music and adult education, shall be limited on the basis of race, color, creed, religion, sex,ancestry, national origin, or social or economic status.

F. The athletic program, including but not limited to intramural, extramural and interscholastic sports, shall be available on an equal basis to all students regardless of race, color, creed, religion, sex, ancestry, national origin, or social or economic status. The athletic program as a whole shall be planned to ensure that there are sufficient activities so that the program does not deny the participation of large numbers of students of either sex.

G. School personnel shall not use tests, procedures or other guidance and counseling materials which are differentiated or stereotyped on the basis of race, color, creed, religion, sex, ancestry, national origin, or social or economic status. When informing students about possible career, professional and/or vocational opportunities school personnel shall in no way restrict or limit the options presented to students on the basis of race, color, creed, religion, sex, ancestry, national origin, or social or economic status.

PHILOSOPHY

Mathematics is a basic tool necessary for daily life as well as in all areas of employment. The goal of the mathematics curriculum for Hamilton Township Schools is to provide a climate where each student can achieve at his/her own rate and to a maximum potential regardless of race, sex, religion, or socio-economic status. A fundamental task of our schools is to develop the potentialities of each individual student to his/her capacity and provide every student with the mathematical skills necessary for success in the ever-changing occupational fields.

BOARD OF EDUCATION POLICY NO. 101

PHILOSOPHY OF EDUCATION

We believe that in order to serve the needs of a rapidly growing community, we must prepare our students to be well-rounded individuals who are able to cope with the complex problems of our society.

In order to do so we believe the identification of individual differences plus the development of the potentialities of each individual is basic to our educational planning.

In addition to our fundamental task of developing our students to their full capacity, academic as well as other areas, we feel we must also produce students who are capable of self-direction and whose behavior is acceptable to society. As a citizen, each student must be prepared to protect, to live in, and to contribute to our democracy.

Furthermore, we believe the school program should be relevant to our changing society. We must consider, not only the ever-changing occupational fields and social concerns, but also the students' personal needs in life.

Required in achieving the goals for our school system is a high calibre, well-prepared staff of adequate size and wide-ranging abilities. It is also recognized that students and staff can only reach their full potential when there are adequate educational supplies, equipment, buildings, and grounds. It is the intent of the Board to provide the materials and facilities that needs dictate and means permit.

Date Adopted: 10/15/75
Date Revised:

T AND E GOALS

Outcome Goals

1. To acquire basic skills in obtaining information, solving problems (including but not limited to Mathematics), thinking critically, and communicating effectively (including but not limited to reading, writing, speaking, and listening).

5. To acquire the necessary skills to gain employment and to attain the education necessary for educational advancement beyond high school.

Process Goals

1. Instruction which bears a meaningful relationship to the present and future needs and interests of pupils.

2. Significant opportunities for students consistent with their individual needs and abilities to receive varied, specialized and individualized educational experiences.

T AND E STANDARDS -
Grading Policy/Procedure

COURSE OF STUDY STANDARDS AND MEASURES

The standard for this course is that 70 percent of the students will achieve minimum competency in the skills/competencies/concepts contained in the course of study.

The attainment of this minimum competency will be measured through the use of at least the following measures of achievement:

1. Teacher-made achievement test.
2. Teacher-made rating scales and check lists for observation of classroom behaviors.

The basis for the development of standards and measures for this course of study is contained in the Thorough and Efficient (T & E) code:

6:8-3.23 District and School Educational Objectives and Standards

(a) Written educational objectives and standards for the educational program (curriculum), based upon district and school goals, shall be developed in consultation with teaching staff members under the direction of the chief school administrators.

During the 1979-1980 school year, teaching staff members, administrators, and supervisors were involved in the development of a standard for each course of study and the identification of measures that would determine if that standard has been met.

The standard is a district-wide goal that attempts to identify expected student outcomes on a yearly basis. The standards and measures for this course of study can be modified from year to year based on input from teaching staff and administrators.

The standard is not applied to an individual teacher, a specific class of students, or a specific school. The standard will reflect a compilation of student minimum competencies for all schools in the district that offer this course. The standard and measures will be used to evaluate the district's program for this course as outlined in the T & E code:

6:8-3.7 Evaluation of Pupil Progress

(a) Evaluation procedures shall be developed and implemented to provide for the continuous comprehensive review of pupil progress for district and school goals and program objectives. The evaluation shall be conducted by teaching staff members under the direction of the chief school administrator and should include consultation with parents or guardians and pupils. District evaluation results shall be reported annually by the chief school administrator to the district board of education at a public meeting.

Adopted September 1967 Revised 1972

OFFICE OF THE SUPERINTENDENT
HAMILTON TOWNSHIP SCHOOLS

SECONDARY

MARKING POLICIES

1. Purposes and Uses of Evaluation

Intelligent administration of marks requires uniform understanding and agreement on their purposes and the uses made of them.

Marks are legitimately used to:

1.1 Report educational progress and achievement to the pupil and his parents.
1.2 Report educational progress and achievement to prospective employers and post-graduate educational authorities.
1.3 Aid the pupil and his advisors in planning his future educational program.

Marks are not to be used as a method of reward or punishment. They are an evaluation of an individual's progress, not a judgment of a pupil's character or personality.

2. Philosophy

The determination of marks requires the use of professional judgment; it should not be a mechanical process.

The use of fixed percentages in determining marks is subject to many uncontrolled variables and therefore is frequently unrealistic. Likewise the use of a predetermined frequency distribution (normal curve) tends to be invalid unless applied with large heterogeneous groups. These practices are not recommended without modification based on teacher judgment and experience.

Our aim is to record a report card mark which is accurate, fair to the pupil, and consistent with the evaluation policy of other teachers. The factors to be used in determining this mark should include the following items:

a. Scholarship:
   Knowledge
   Understanding
   Skills
b. Application and Participation
c. Initiative and Interest
d. Assignments and Work Habits

Marking Policies

Some subjects, by their nature and future usage, must be graded primarily in terms of the degree of fulfillment of course objectives or apparent command of course contents (scholarship). Others lend themselves more to consideration of pupil effort and the mark may be influenced more by the individual's progress. (e.g., "C" level courses, the arts, physical education.) Honor averages will rarely be attained where scholarship is below grade level.

In selected "advanced" groups honor grades may be expected to predominate

3. Guide to Marks

The factors listed in Part II should be the primary basis for differentiating between marks. The marks are:

A - Excellent

This mark is earned by the student who consistently demonstrates outstanding ability in scholarship, above average performance in most other factors, and not less than average performance in any area of evaluation.

B - Above Average

This mark is earned by the student who consistently demonstrates above average ability in most factors including scholarship. If he is below average in an area other than scholarship, this weakness if offset by unusual strength in some other factor.

C - Average

This mark is earned by the student who demonstrates a satisfactory level of performance in most areas of evaluation. In "A" level courses scholarship should be at least on an average level of performance.

D - Below Average

This mark is earned by the student whose performance is typically less than satisfactory. However, he does provide evidence of personal progress in one or more of the evaluation factors, and his level of scholarship is within the range of minimal competence.

P - Passing

This mark is earned by the student whose effort and attitude warrant the attainment of course credit even though his scholarship is so far below average that in the subject area concerned he would be considered incompetent.
(NOTE: This mark is to be used only in "C" level courses, grades 7 - 12.)

E - Failure

This mark is earned by the pupil whose typical scholarship is very unsatisfactory. Either he fails to meet the course requirements, or his performance in most of the evaluative factors is unacceptable. A pupil who earns an "E" in a majority of the marking periods in any course shall have failed that course.

Inc. - Incomplete

This mark may be used at the discretion of the teacher when recommended by the attendance office, to permit make-up work. A limit of two weeks is allowed to make up work for which an Incomplete is given. Failure to make up the work will be a factor in determining the mark earned. This mark should be used sparingly. It is intended primarily for cases of extended absence due to illness or where the pupil may have missed a particularly significant phase of work.

Ab. - Absent

This mark is used only with administrative approval. It is reserved for use within the following criteria:

1. A student is passing in the opinion of the teacher but has been absent for more than 25% of the class sessions (12 or more days) in a given marking period. This student is to receive a grade of "Ab".
2. A student passes during the next marking period with 12 or less days absent and a semester total of less than 23 days absent, the grade earned would be recorded and a semester grade calculated accordingly. (This applies to semester courses as well as full year courses.)

Note: If a student is failing and has been absent for 12 or more days during a marking period, the grade will be "E".

4. Standard Practices

Attendance

Regardless of how legitimate or unavoidable the absence may be, a student has missed something. In these cases, we should be sympathetic and helpful, and arrange to make up work missed where possible. However, it is accepted that a student can make up only a portion of the work missed.

A student who fails to meet the 75% attendance requirement and is failing will not receive credit for the marking period and/or the semester/year course.

Late Entrants

Pupils present over half the marking period (particularly the latter half) can usually be graded without difficulty. "Inc." may be used if deemed desirable.

Pupils present less than half the marking period will usually require time to make up work unless marks can be obtained from a previous school or other source.

x

Marking Policies

Pupils present less than one-third the marking period will usually be marked "Ab".

Final Failures

"E" marks in a majority of marking periods will result in a final "E" average.

Any pupil who fails the final marking period MAY be failed for the year. This rule is to be applied only to those pupils who fail because of a deliberate lack of effort. All failures under this rule must have the approval of the administration and the pupil and his parents should have had prior notice in time to take corrective action.

Discussion of Marks with Pupils

A pupil has a right to discuss his progress with his teacher at any appropriate time. He has a right to know what marks are recorded by his name and the teacher's interpretation of these marks. Prolonged discussions of marks should be held outside of class time. Teachers are advised to alert pupils to apparent changes in their progress. There is no excuse for "surprises" on report cards.

Teachers are expected to extend this same information to guidance counselors upon request.

Changing Marks

A mark should be changed if the teacher has made an error, but for no other reason. It is the teacher's responsibility for correcting the report card and the office records. All changes must be approved by the principal or vice-principal.

The correction is made by crossing over the error and adding the correct mark. The teacher will initial the change. Please avoid erasures on the report card.

Records

Teachers are expected to keep complete and accurate records. Sufficient data should be recorded to substantiate the mark.

Recording Marks

Marks placed on report cards and permanent records should be in ink, the only exception being "Inc." which is in pencil. "E" is recorded in red ink. Plus or minus is not used on these records.

Marking Policies

Computation of Final Average Mark

Letter grades are converted to the following numerical values:

A: 4 B: 3 C: 2 D: 1 P: 1 E: 0

The total numerical value divided by the number of marking periods used equals the numerical value of the final average. The following scale is used to convert quotients to final averages:

more than 3.5	= A
more than 2.5 but less than 3.5	= B
more than 1.5 but less than 2.5	= C
more than 0.5 but less than 1.5	=*D
less than 0.5	= E

For quotients of 3.5, 2.5, 1.5, and 0.5 the trend of the final semester will determine the final average mark.

*If "p" is predominant or is the final mark of a semester course it will be the final average mark.

Any pupil who fails more than half the individual marking periods will fail for the year.

Examples:

Full Year Courses:	Final Avg. Mark
1. C C C B 2 2 2 3 = 9; 9÷4 = 2.25	C
2. C B C B 2 3 2 3 = 10; 10÷4 = 2.5	B(Trend)
3. C B B C 2 3 3 2 = 10; 10÷4 = 2.5	C(Trend)
4. B E E E 3 0 0 0 = 3	E (More than half)

Semester Courses:	Final Avg. Mark
1. A C 4 2 = 6; 6÷2 = 3	B
2. C B 2 3 = 5; 5÷2 = 2.5	B(Trend)
3. E P 0 1 = 1; 1÷2 = 0.5	P
4. C E 2 0 = 2; 2÷2 = 1.0	**D

**A final E may be given if all conditions for special ruling have been met.

Introduction

This curriculum guide is designed to be used in conjunction with the planbook. A list of general objectives, major topics to be covered, and a course outline are given. These topics are not necessarily in sequential order.

Some strategies and/or activities are suggested for each unit. These are suggestions for the entire unit and do not correspond to a specific objective. It is recommended that you add your own successful strategies/activities to your guide. This will aid in your planning as well as in future revisions.

There are seven (7) sources listed under suggested resources in this guide. These are available in the school, central office and/or curriculum library.

1. Text - Mathematics for the Real World, Price/Brame/Charles/Clifford; Merrill Publishing Co., 1982

2. Text - Consumer Related Mathematics, Kravitz/Brant; Holt, Rinehart & Winston Publishing Co., 1976

3. Text - Modern Applied Mathematics, Gold/Carlberg; Houghton Mifflin Co., 1974

4. Text - Modern Basic Geometry, Jurgenson/Maier/Donnelly; Houghton Mifflin Co., 1973

5. Text - Stein's Refresher Mathematics, Stein; Allyn and Bacon, Inc., 1974

6. Ditto Masters - Mathematics for the Real World, Price/Brame/Charles/Clifford; Merrill Publishing Co., 1982

7. Workbook - Real World Skills for General Mathematics, Merrill Publishing Co., 1982

i.e. The numbers in the resource column correspond to these course numbers.

CONSUMER MATHEMATICS II

Major Topics

I) Money Management

A. Job Skills
B. Paychecks and Deducations
C. Savings Accounts
D. Checking Accounts
E. Credit
F. Income Tax

II) Measurement and Estimation

A. Length
B. Capacity
C. Temperature
D. Ratio
E. Area
F. Volume

III) Statistics and Probability

A. Analyzing Data
B. Graph Interpretation
C. Graph Construction
D. Determining Probabilities
E. Interrelating Probability and Statistics

IV) Pre-Algebra

A. Directed Numbers
B. Solving Open Sentences
C. Using Formulas and Equations

GENERAL OBJECTIVES

The student who successfully completes this course will:

1. Be proficient in basic computational skills.
2. Apply these basic computational skills to consumer related topics.

CODE	OBJECTIVE	SUGGESTED STRATEGIES & OBJECTIVES	SUGGESTFD RESOURCES	SUGGESTED ASSESSMENT/EVALUATION
	The Student Will:			
CM2 1.1	Read and interpret classified ads to find a job.	a) Have students find employment opportunities within the classified ads and interpret skills, experience, and education necessary.		Teacher made achievement tests, quizzes, and projects, as well as teacher made rating scales. Check lists of classroom behavior should be used throughout Consumer Math II for evaluation.
CM2 1.2	Complete an application for a social security number and an employment form.	b) Have students bring in applications for jobs, education, professional experiences, or social security numbers.		
CM2 1.3	Acquire essential mathematics skills needed to pass an employment test.	c) Supplement book materials with actual schedules to calculate 24 hour time (transportation, class, working hours, etc.).		
CM2 1.4	Read and interpret 24-hour time notation.	d) Discuss various professions where earnings are based on commission.		
CM2 1.5	Express time and minutes as fractions and decimals.	e) Have guest speakers come in to explain what skills, experience, and background are necessary to obtain specific jobs and professions.		
CM2 1.6	Use steps in solving word problems.			
CM2 1.7	Compute weekly wages, overtime rates, and total wages based on the hourly rate.			
CM2 1.8	Compute estimated earnings when tips and commissions are involved.			

CODE	OBJECTIVE	SUGGESTED STRATEGIES & OBJECTIVES	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT/EVALUATION
	The Student Will:			
CM2 3.1	**Identify the various savings interest rates.**	a) Have students obtain literature on savings rates from various bands to compare one from the other.	1. Text - Chapter 3, pp. 91-109 2. Text - Chapter 6, pp. 135-160 3. Text - Chapter 9, pp. 324-329 5. Text - Chapter 5-3, pp. 565-567 6. Text - Ditto Master - pp. 11-16 7. Workbook - pp. 23-25	
CM2 3.2	Compute amounts using coins, currency, and checks.	b) Have a contest with the students: See who can bring in an advertisement from a savings institute with the highest interest rate.		
CM2 3.3	Fill out savings account deposit and withdrawal slips.	c) Supplement book materials with deposit and withdrawal slips for savings accounts from various banks.		
CM2 3.4	Use a passbook for a savings account.	d) Have a guest speaker from a bank come in to discuss interest rates of a savings account, and other types of investments available at the bank.		

	OBJECTIVE	SUGGESTED STRATEGIES & OBJECTIVES	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT/EVALUATION
	The Student Will:			
CM2 2.1	Read an earnings statement and compute take **home pay.**	a) Have students bring in various job opportunities from classified ads, employment agencies, etc. and compare salaries and benefits.	1. Text - Chapter 2, pp. 71-89 2. Text - Chapter 10, pp. 254-271 5. Text - Chapter 5-1, pp. 530-541 6. Ditto Master - pp. 9, 10 7. Workbook - pp. 15-21	
CM2 2.2	Compute weekly and yearly wages using common payroll periods.	b) Supplement book materials with actual withholding-tax tables, social security, city/state tax tables.		
CM2 2.3	Compare job earnings and benefits.	c) Have students bring in various earnings statements and compare the different ways employers prepare these statements.		
CM2 2.4	Read and interpret a withholding-tax table.	d) Conduct a poll with the students to determine their parents' payroll periods. The results can be used to determine the most used type of payroll period.		
CM2 2.5	Compute Social Security deductions and city and state taxes that effect the average worker.	e) Use calculators to compute social security deductions (or city/state taxes). Enter wages [X] Enter Percent [%]		
CM2 2.6	Solve word problems that do not give enough information.			

CODE	OBJECTIVE	SUGGESTED STRATEGIES AND ACTIVITIES	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT/EVALUATION
	The Student Will:			
CM2 4.1	**Explain checking account charges.**	a) Have students visit a bank and obtain literature on checking accounts.	1. Text - Chapter 4, pp. 111-129 2. Text - Chapter 6, pp. 148-157 6. Ditto Master, pp. 18-24 7. Workbook, pp. 26-44	
CM2 4.2	Fill out checking account deposit slips and personal checks.	b) Supplement book materials with checks, deposit slips and check registers. Have students set up a hypothetical situation of buying items, writing checks, depositing cash, and keeping a check register.		
CM2 4.3	Read and interpret information found on checks and a bank account statement.			
CM2 4.4	Keep a bank register and compare to the bank statement.			
CM2 4.5	Solve word problems with multiplication and division.			

	OBJECTIVE	SUGGESTED STRATEGIES & OBJECTIVES	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT/EVALUATION
	The Student Will:			
CM2 5.1	Learn and compare charge account credit plans and finance charges.	a) Have students obtain credit agreements and applications from various firms/agencies and compare.	1. Text - Chapter 5, pp. 131-149 2. Text - Chapter 8, pp. 214-216 6. Ditto Masters - pp. 26, 27 7. Workbook - pp. 47-55	
CM2 5.2	Interpret and check a charge account statement.	b) Have students set up hypothetical situations - buying, charging, calculating total charges, minimum payments, finance charges.		
CM2 5.3	Compute credit card finance charges, new balances, and minimum payments.	c) Have students keep a monthly budget. Discuss various job opportunities for students at this particular age. Have students compare their expenses to their earnings to determine if they balance.		
CM2 5.4	Compute personal monthly expenses.			
CM2 5.5	Solve word problems by estimating costs and payments.			
CM2 5.6	Explain what bankcards are, how they are used, and how much they cost.			

CODE	OBJECTIVE	SUGGESTED STRATEGIES & OBJECTIVES	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT/EVALUATION
	The Student Will:			
CM2 6.1	**Explain how federal income tax is used.**	a) Have a guest speaker **talk about taxes and where the money is used.**	1. Text - Chapter 6, pp. 151-167. 2. Text - Chapter 10, pp. 260-271 5. Text - Chapter 5, pp. 536-541 6. Ditto Masters - pp. 29-31 7. Workbook - pp. 57, 58	
CM2 6.2	Read and interpret types of tax return forms and amounts on a W-2 form.	b) Supplement book materials with original tax forms and tables from previous years.		
CM2 6.3	Complete Page 1 of Short Form 1040A.	c) Have students figure out a hypothetical person's income tax, given a yearly salary, deductions, and status.		
CM2 6.4	Use a tax table to find the amount of tax.			
CM2 6.5	Compute the amount of tax due or the amount of refund.			
CM2 6.6	Solve word problems by obtaining information from charts and tables.			

CODE	OBJECTIVE	SUGGESTED STRATEGIES & OBJECTIVES	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT/EVALUATION
	The Student Will:			
CM2 7.1	Measure length by using appropriate units of the metric system.	a)Show filmstrip - The Metric System as introduction to unit.	1. Text - Chapter 7, pp. 169-187 2. Text - Chapter 3, page 51 3. Text - Chapter 6, pp. 226 4. Text - Chapter 7, pp. 244-249; Chapter 11, pp.402-406 5. Text - pp. 296-304 pp. 420-431 6. Ditto pp. 33-37 7. Workbook pp. 65-66 8. Filmstrip - The Metric System - The Universal Language of Measurement FS-S-257	
CM2 7.2	Make conversions within the metric units of length.	b)Have a collection of objects and/or shapes for the students to measure.		
CM2 7.3	Measure length by using appropriate units of the English system.	c)Have students do practical problems involving the fencing of a yard, wood-working, drop ceilings, and other construction applications		
CM2 7.4	Make conversions within the English units of length.			
CM2 7.5	Find the perimeter of a given object.	d)Discuss advantages, disadvantages of using larger or smaller units in a system. (ex: avoid fractions)		
CM2 7.6	Find the circumference of a circle.			

CODE	OBJECTIVE	SUGGESTED STRATEGIES AND ACTIVITIES	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT/EVALUATION
	The Student Will:			
CM2 8.1	Measure capacity by using the appropriate units of the metric system.	a) Have students investigate practical applications of measuring capacities. ex. recipes, mixing paint, mixing household cleaners.	1. Text - Chapter 8, pp. 189-205 2. Text - Chapter 3, pp. 56, 66 3. Text - Chapter 6, pp. 233, 244 - pp. 247-248 5. Text - pp. 396-399 pp. 415-419 pp. 420-431 pp. 405-431 pp. 125-134 6. Ditto pp. 38-41 7. Workbook - pp. 67-70	
CM2 8.2	Make conversions within the metric units of capacity.	b) Have students create their own recipes or formulas in the metric system.		
CM2 8.3	Measure capacity by using the appropriate units of the English system.	c) Have students record daily temperatures for a week at various times of the day. Use thermometers of each type, then use formula to check correspondence.		
CM2 8.4	Make conversions within the English units of capacity.	d) Supplement book material with actual bus, train, or plane schedules.		
CM2 8.5	Measure temperature using the Celcius Scale and Fahrenheit Scale.			
CM2 8.6	Convert Fahrenheit temperatures to Celcius temperatures.			
CM2 8.7	Measure a length of time by using the units of time.			

CODE	OBJECTIVE	SUGGESTED STRATEGIES & OBJECTIVES	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT/EVALUATION
	The Student Will:			
CM2 9.1	Write ratios as fractions.	a) Supplement text by obtaining or making time cards and filling them out.	1. Text - Chapter 9, pp. 207-225 2. Text - Chapter 4, pp. 82-85, pp. 104-107	
CM2 9.2	Write rates and unit rates.	b) Have students work with gear ratios or **pulley ratios.**	3. Text - Chapter 8, pp. 284-299, Chapter 9, pp. 316-337	
CM2 9.3	Solve proportions by cross products.	c) Have students do practical applications of **percent. ex: discount, commission, interest.**	4. Text - Chapter 7, pp. 244-270 5. Text - pp. 516-520 pp. 220-254 pp. 530-580	
CM2 9.4	Make conversions between fractions, decimals and percent.	d) Have students analyze scale **models and compare model** measurements to actual or use model to predict actual.	6. Ditto - pp. 42-46	
CM2 9.5	**Compute percentage of a number.**	e) Have students draw blueprints or plans to a building or project using an appropriate scale.		
CM2 9.6	**Compute percentage that one number is of another.**	f) Have students use practical applications of ratio in regard to converting mixtures to a larger quantity, cleaning fluid, chlorine in pools, etc.		
CM2 9.7	Determine if figures are similar.			
CM2 9.8	Use ratio to find missing parts of similar figures.			
CM2 9.9	Use ratios in scale drawings.			

CODE	OBJECTIVE	SUGGESTED STRATEGIES AND ACTIVITIES	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT/EVALUATION
	The Student Will:			
CM2 10.1	Define basic geometric terms related to area.	a) Have students do practical applications of area with relation to homeowning - ex: concrete, carpeting.	1. Text - Chapter 10, pp.227-249 2. Text - Chapter 1, pp.16, 21 3. Text - Chapter 4, pp. 156-186 4. Text - Chapter 11, pp.389-419 5. Text - pp. 366-370 6. Ditto - pp. 47-52 7. Workbook - pp. 71-76	
CM2 10.2	Approximate area using metric units.	b) Have students discuss practical applications of surface area. ex: home construction; siding, roofing.		
CM2 10.3	Find the area of polygons.			
CM2 10.4	Find the area of circles.			
CM2 10.5	Find the surface area of polygonal areas.			

CODE	OBJECTIVE	SUGGESTED STRATEGIES AND ACTIVITIES	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT/EVALUATION
	The Student Will:			
CM2 11.1	Find the volume of prisms.	a) Have students work with practical applications of volume involving the home - concrete ordering, heating, air conditioning, BTU.	1. Text - Chapter 11, pp.251-269 2. Text - Chapter 3, pp.56-58 3. Text - Chapter 4, pp.156- 4. Text - Chapter 11, pp.411-420 5. Text - pp. 382-384 pp. 415-419 6. Ditto pp. 53-55 7. Workbook, pp. 77-78	
CM2 11.2	Find the volume of pyramids.			
CM2 11.3	Find the volume of cylinders.			
CM2 11.4	Find the volume of cones.			
CM2 11.5	Find the volume of spheres.			
CM2 11.6	Find the volume of objects composed of more than one solid.			

CODE	OBJECTIVE	SUGGESTED STRATEGIES & OBJECTIVES	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT/EVALUATION
	The Student Will:			
CM 2 12.1	Gather and record data from a survey	a) Gather data about eye color, hair color, smoker and non-smoker, and tally their results.	1. Text - Chapter 12, pp. 271-287 5. Text - pp. 526-527 6. Ditto Masters, pp. 62-63 7. Workbook, pp. 81	Teacher made achievement tests, quizzes, and projects, as well as teacher made rating scales. Checklists of classroom behavior should be used throughout Consumer Math II for evaluation.
CM2 12.2	Explain samples and demonstrate the use of data in a frequency table	b) Take a survey of the astrology signs in the class to determine mode and range of responses. Tally all information from surveyed classes and make a bulletin board display.		
CM2 12.3	Determine the mean, median, mode and range of a set of data.	c) Gather data about each student's height, weight and shoe size, then determine the class mean, mode, median, and range for each.		
CM2 12.4	Compute the mean, median and mode in word problems.	d) Try to develop sets of data where the mean, median, and mode are all the same.		
CM2 12.5	Predict how the mean, median, and mode are influenced by data.	e) To show that statistics can be misleading, each student should research a topic, take a survey and use mean, median, mode, and range to draw incorrect conclusions.		

CODE	OBJECTIVE	SUGGESTED STRATEGIES & OBJECTIVES	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT/EVALUATION
	The Student Will:			
CM 2 13.1	Read, construct and interpret a pictograph.	a) Use graphs found in newspapers and magazines for interpretation in class.	1. Text - Chapter 13, pp. 289-307 2. Text - pp. 68, 74, 110, 160, 192 3. Text-Chapter 11, pp. 378-394 5. Text - pp. 523-525 6. Ditto Masters, pp. 65, 66, 67 7. Workbook, pp. 85-89, 97	Teacher made achievement tests, quizzes, and projects, as well as teacher made rating scales. Checklists of classroom behavior should be used throughout Consumer Math II for evaluation.
CM 2 13.2	Read, construct and interpret a bar graph.	b) Have students prepare a bulletin board representing the past 15 graduating classes of the school. Use the graph to predict numbers in future graduating classes.		
CM 2 13.3	Read, construct and interpret a line graph.	c) Prepare graphs involving indoor and outdoor temperatures over a period of time.		
CM 2 13.4	Read, construct and interpret a circle graph.	d) Have students select five stocks from the exchange and graph their progress over a period of two weeks.		
CM 2 13.5	Read, construct and interpret a scatterdiagram.	e) Have students prepare a graph representing their math test scores for the course of a marking period.		
CM 2 13.6	Explain what makes a pictograph, bar graph, and line graph misleading.			

	OBJECTIVE	SUGGESTED STRATEGIES & OBJECTIVES	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT/EVALUATION
	The Student Will:			
CM 2 14.1	**Explain all possible outcomes for a given set of circumstances.**	a) Use a deck of cards, dice, roulette wheel and slot machine to determine possible outcomes for given circumstances. (Programs on PET computers)	1. Text - Chapter 14, pp. 309-325 2. Text - p. 326 5. Text - pp. 527-528 6. Ditto Masters, pp. 69-73 7. Workbook, pp. 99, 101	Teacher made achievement tests, quizzes, and projects, as well as teacher made rating scales. Checklists of classroom behavior should be used throughout Consumer Math II for evaluation.
CM2 14.2	Find the probability of an outcome and express that probability as a fraction.	b) Bring in a guest speaker from an Atlantic City Casino.		
CM2 14.3	**Find the probability of a given event or two independent events.**	o) Use different types of coins (penny, nickel, dime and quarter) and determine possible outcomes of tossing each.		
CM2 14.4	Compute the probability of two or three events.	d) Determine the probability of pulling specific colored marbles from a given set. Do the same experiment using different colored socks in a drawer.		

CODE	OBJECTIVE	SUGGESTED STRATEGIES & OBJECTIVES	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT/EVALUATION
	The Student Will:			
CM2 15.1	Find the odds, given the probability.	a) Bring in a guest speaker to discuss how odds and probability are used in racing and sports.	1. Text - Chapter 15, pp. 327-343 6. Ditto Masters, pp. 75, 77.	Teacher made achievement tests, quizzes, and projects, as well as teacher made rating scales. Checklists of classroom behavior should be used throughout Consumer Math II for evaluation.
CM2 15.2	Change odds to probability and visa versa.	b) Use enrichment exercises as described in the "Notes to the Teacher" in Mathematics for the Real World.		
CM2 15.3	Given the probability for each of two events, find the probability or odds that both events will happen.			
CM2 15.4	Compare actual and expected probability.			
CM2 15.5	Use statistics to make estimations.			
CM2 15.6	Find expected winnings and determine if a game is fair.			

CODE	OBJECTIVE	SUGGESTED STRATEGIES	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT/ EVALUATION
	The Student Will:			
CM 2 16.1	**Demonstrate the use of positive and negative integers.**	a) Use the number line to illustrate addition and subtraction to formulate rules for addition and subtraction of integers.	1. Text - **Chapter** 16, pp. 345-365 5. Text - pp. 474-486 6. Ditto Masters, pp. 81-83 7. Workbook, pp. 107, 109, 111, 113, 117, 119	
CM 2 16.2	Add integers.	b) Evaluate expressions without order of operations to see how many different answers the class can get. Stress the need for a consistent answer for effectiveness.		
CM 2 16.3	Subtract integers.	c) Compare graphing of ordered pairs to bar and line graphs previously covered.		
CM 2 16.4	Multiply integers.			
CM 2 16.5	Divide integers.			
CM 2 16.6	Evaluate arithmetical expressions using order of operations.			
CM2 16.7	Locate and name points by using ordered pairs.			

CODE	OBJECTIVE	SUGGESTED STRATEGIES & OBJECTIVES	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT/EVALUATION
	The Student Will:			
M2 17.1	Solve equations by using subtraction.	a) Stress comparisons between an equation and a scale. Both sides must remain the same to be balanced. What you do to one side, you must do to the other.	1) Text - Chapter 17, pp. 367-387. 5) Text - pp. 498-511. 6) Ditto Masters, pp. 86-88 7) Workbook, p. 121.	
M2 17.2	Solve equations by using addition.	b) Consolidate rules for solving equations by using inverses.		
M2 17.3	Solve equations by using division.	c) Once students can solve single variable equations, have them illustrate their knowledge by solving equations of the following nature. Solve: for r if $\frac{d}{t} = r$ for f if $\frac{f}{a} = m$		
M2 17.4	Solve equations by using multiplication.			
M2 17.5	Solve 2-step equations			
M2 17.6	Solve inequalities			

CODE	OBJECTIVE	SUGGESTED STRATEGIES & OBJECTIVES	SUGGESTED RESOURCES	SUGGESTED ASSESSMENT/EVALUATION
	The Student Will:			
CM2 18.1	Write number expressions using symbols.	a) Have students write out all the possible words they could use that would mean addition (i.e. sum, more than, greater than, added to, etc.) Do the same for subtraction, multiplication and division. Students should then write their own word expressions, exchange them with other students as challenge problems to translate into symbols.	1) Text - Chapter 18, pp. 389-409. 5) Text - pp. 487-498 6) Ditto Masters, pp. 91, 93-96. 3) Text - pp. 342-347, pp. 39-44.	
CM2 18.2	Apply order of operations to evaluate algebraic equations.			
CM2 18.3	Solve problems using formulas.			
CM2 18.4	Write and solve equations from word problems.			
CM2 18.5	Compute squares and use square root table.			
CM2 18.6	Use Pythagorean Theorem to find lengths missing from a triangle.			

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APPENDIX A

Careers

Auto Sales Person
Bank Employee
Bookkeeper
Carpet Estimater
Data Processor
Dietician
Insulation Worker
Insurance Agent
Lab Technician
Licensed Practical Nurse
Meter Reader
Postal Employee
Real Estate Agent
Recreation Director
Rent-A-Car Agency Employee
Sales Clerk
Store Manager
Swimming Pool Contractor
Telephone Employee
Utility Clerk

CAREER EDUCATION COMPONENTS GRADES 9 - 12

APPRECIATIONS AND ATTITUDES	SELF-AWARENESS	DECISION MAKING	EDUCATIONAL AWARENESS	OCCUPATIONAL AWARENESS	ECONOMIC AWARENESS	SKILL AWARENESS BEGINNING COMPETENCE	EMPLOYABILITY SKILLS
GRADE 9 RELATE ATTITUDES AND AWARENESS TO SPECIFIC OR RELATED CLUSTERS.	BUILD REALITY AWARENESS PERCEPTION OF "WHERE I AM COMPARED TO WHERE I WANT TO BE".	ANALYZE AND REFINE PREVIOUS CAREER DECISIONS BASED ON COUNSELING, WORK EXPERIENCE AND ALL AVAILABLE INFORMATION.	DETERMINE A TENTATIVE PERSONAL SCHEDULE TO ACQUIRE NECESSARY AND DESIRED SPECIAL SKILLS.	BASED ON UNDERSTANDING OF INTERESTS VALUES AND ABILITIES STUDY CAREER CLUSTERS, SURVEY COURSES IN CAREER CLUSTERS.	UNDERSTAND THE TOOL OF BUSINESS: READ AND INTERPRET TABLES, GRAPHS, AND CHARTS USED AS A CONSUMER.	MATCH NECESSARY SKILLS AND PROCESSES WITH SELECTED CAREER CLUSTERS.	UNDERSTAND THE SKILLS NECESSARY TO ACQUIRE, MAINTAIN, AND PROGRESS IN EMPLOYMENT.
GRADE 10 UNDERSTAND THE IMPORTANCE OF ALL CAREERS AND THEIR CONTRIBUTION TO SOCIETY.	RELATE PERSONAL VALUES AND INFLUENCE OF OTHER'S VALUES ON CAREER CHOICES.	SELECT A CAREER CLUSTER FOR IN-DEPTH ANALYSIS.	ACQUIRE SPECIAL SKILLS NEEDED FOR PREDICTED OR DESIRED LIFE-STYLE.	EXPLORE THE CAREER CLUSTERS IN DEPTH BASED ON INTERESTS, VALUES, AND ABILITIES. GAIN PLANNED WORK EXPERIENCE.	RELATE LEGAL AND FINANCIAL CONSIDERATION TO CAREER CLUSTERS IN GENERAL.	MATCH INDIVIDUAL ABILITIES AND INTERESTS WITH SKILLS AND PROCESSES NEEDED IN CAREER CLUSTERS.	DEVELOP PERSONAL AND SOCIAL INTERACTION SKILLS RELATED TO IN-DEPTH STUDY OF ONE CAREER CLUSTER.
GRADE 11 MAKE A COMMITMENT TO THE SELECTION OF A CAREER BASED ON INDIVIDUAL ATTITUDES VALUES AND EDUCATION.	MODIFY AND/OR ACCEPT DIFFERENCES BETWEEN THE INDIVIDUAL'S PERSONAL VALUES AND THE INFLUENCE OF OTHERS ON CAREER CHOICES.	CHOOSE A TENTATIVE CAREER.	ASSESS AND IMPLEMENT A PERSONAL PLAN TO OBTAIN THE NECESSARY OR REQUIRED SPECIAL SKILLS.	IDENTIFY NECESSARY ABILITIES REQUIRED IN SELECTED CAREER.	UNDERSTAND THE RELATIONSHIP OF LEGAL AND FINANCIAL CONSIDERATIONS TO A SPECIFIC CAREER CLUSTER AND PERSONAL AND FAMILY MATTERS.	DEVELOP SKILLS BASIC TO THE CHOSEN CAREER CLUSTER.	DEVELOP EMPLOYABILITY SKILLS NECESSARY FOR THE ANTICIPATED JOB. PLAN ALTERNATIVES FOR JOB PLACEMENT.
GRADE 12 UNDERSTAND THE TASKS REQUIRED WITHIN CHOSEN JOB CLUSTER(S) AND DEVELOP THE SPECIFIC SKILLS NEEDED.	DEVELOP SELF CONFIDENCE IN ANTICIPATED CAREER CHOICE.	BE AWARE THAT CAREER DECISIONS ARE FLEXIBLE AT THE EXPENSE OF TIME, EFFORT, AND MONEY.	PLAN THE ACQUISITION OF THE NECESSARY SKILLS REMAINING FOR A CHOSEN LIFE-STYLE.	REASSESS ABILITIES, INTERESTS AND ATTITUDES ACCORDING TO SELECTED CAREER AND LIFE-STYLE. DETERMINE FURTHER REQUIREMENTS NEEDED.	UNDERSTAND THE FINANCIAL AND LEGAL INSTRUMENTS THAT GOVERN AND PROTECT THE WORKER. RELATE THIS TO VARIOUS ROLES ASSUMED IN THE ECONOMY.	MASTER THE SKILLS BASIC TO CHOSEN CAREER CLUSTER AND DEVELOP SKILLS RELATED TO A SPECIFIC JOB.	EXPLORE AT LEAST THREE ALTERNATIVES FOR JOB PLACEMENT THROUGH WORK EXPERIENCE.